

REMARKS

This is in response to the Office Action dated June 25, 2007. Applicant has amended the application as set forth above. In more specific, claims 1-3 have been amended. All the features of the amended claims are fully supported by the originally filed application including lines 3-5, page 9; lines 10-12, page 10; lines 20-22, page 11; lines 5-8, page 13 of the original specification (WO2004/069540) and Figs. 1-5 of the original drawings. Thus, the amendments do not add new matter to the application. Upon the entry of the amendments, claims 1-3 are pending in this application. Applicant respectfully requests the entry of the amendments and reconsideration of the application.

Claim Rejections under 35 U.S.C. §103

The Examiner rejected claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over JP 56137968 to Fujishiro in view of U.S. Patent No. 5,894,797 to Brennan et al. Applicant respectfully disagrees with the Examiner. Also, in response, Applicant has amended claims 1-3.

Fujishiro Does Not Teach Claims 1-3

The Examiner stated that “.. it is noted that the features upon which applicant relies are not recited in the rejected claims(s). Although the Claims are interpreted in light of the specification, limitations from the specification are not read into the claims... Applicant appears to be arguing that the amended claim limitations are a direct result of the structure of the apparatus, but as this structure is not claimed specifically, the claims must be given their broadest reasonable interpretation and have been examined accordingly.”

In response, Applicant has amended claims 1-3, and respectfully submits that the amended claims 1-3 have the structure which enables the surface-to-surface contacts between the three blanket cylinders (21, 23, 25; 41, 43, 45; 51, 53, 55; 71, 72, 74) and one or no direct-printing cylinder (52: 76).

For example, the amended Claim 1 reads (emphasis added),

1. A rotary press comprising:

a first printing unit including a pair of a first blanket cylinder and a first plate cylinder for printing a first color

on one side of printing paper and two pairs of second and third blanket cylinders and second and third plate cylinders which oppose each other with respect to the first blanket cylinder for printing the first color and a second color on the other side of the printing paper, wherein the second and third blanket cylinders contact the first blanket cylinder with a predetermined angle formed between the second and third blanket cylinders with respect to the first blanket cylinder so that the printing paper passing through the first through third blanket cylinders contact the first through third blanket cylinders ***in a surface-to-surface contacting manner between a point on circumference of the second blanket cylinder and a point on circumference of the third blanket cylinder;***

a second printing unit including a pair of blanket cylinders and a pair of plate cylinders which are located in each side of the printing paper having passed the first printing unit, in order to print a second color on one side of the printing paper and print a third color on the other side thereof; and

a third printing unit including a pair of a fourth blanket cylinder and a fourth plate cylinder for printing a fourth color on one side of the printing paper having passed through the second printing unit and two pairs of fifth and sixth blanket cylinders and fifth and sixth plate cylinders which oppose each other with respect to the fourth blanket cylinder for printing the third color and the fourth color on the other side of the printing paper, wherein the fifth and sixth blanket cylinders contact the fourth blanket cylinder with a predetermined angle formed between the fifth and sixth blanket cylinders with respect to the fourth blanket cylinder so that the printing paper passing through the fourth through sixth blanket cylinders contact the fourth through sixth blanket cylinders ***in a surface-***

to-surface contacting manner between a point on circumference of the fifth blanket cylinder and a point on circumference of the sixth blanket cylinder,

wherein tension of printing paper passing through printing units is maintained to be constant, and wherein ***position of a printing pin of each printing unit is consistently maintained*** so as to prevent a pin secession phenomenon of a printed image from occurring.

The surface-to-surface contact between the printing paper and the cylinders is shown clearly in Figs. 1-5, in which the two end points of the surface-to-surface contacts of the printing paper do not lie on a circumference of a single cylinder as in Fujishiro's printing unit, but lie on two different cylinders.

Unlike the present invention, however, Fujishiro discloses perfecting rotary press having one-surface printing unit consisting of a plate cylinder 10 and an impression cylinder 14 for front-surface printing and another one-surface printing unit consisting of another plate cylinder 21 and another impression cylinder 25 for back-surface printing, in which the two one-surface printing units are installed on the right and left sides of the machine bed 1 (See, e.g., Abstract: Figs. 1 and 5-9). Also, the axis of rotation of the Fujishiro's plate cylinders (11, 12, 22, 23) moves around, and the rotational direction of the plate cylinders keeps changing (See, e.g.. Figs. 1 and 4).

With the structure in the amended Claims 1-3 in mind, it must be clear that the features include: at least one of the printing units comprises at least three blanket cylinder (21, 23, 25; 41, 43, 45; 51, 53, 55: 71, 72, 74) and a direct-printing cylinder (52: 76); the printing unit of the present invention does not have any impression cylinder; the tension of the printing paper (9) passing through printing units is always maintained to be constant; the plate cylinder does not change its position relative to the other cylinders; the position of a printing pin of each printing unit is consistently maintained to thus prevent a pin secession phenomenon of a printed image from occurring; and the printing paper (9) passing at least once through three blanket cylinders and one or no direct-printing cylinder contacts the cylinders in a surface-to-surface manner.

In contrast, in Fujishiro's rotary press, the plate cylinders' rotational axis is moving around (Fig. 4) and the rotational direction is also changing (Fig. 1); clockwise and counterclockwise. With these limitations in the structure, it is very difficult to obtain a color image of high quality. That is, the printing pin of each printing unit cannot be maintained consistently. Also, the Fujishiro's rotary press has a plurality of impression cylinders to hold the printing paper while the plate cylinder prints on it. Therefore, for double-side color printing, Fujishiro's rotary press needs two towers of printing units disposed apart from each other, one tower structure for one-surface printing, which makes the traveling distance of the printing paper much longer such that the printing pin gets worsen.

However, the rotary press according to the present invention does not include a single impression cylinder. Instead, the printing paper is inserted and past through three blanket cylinders in at least one of the printing units. Such structural features make the printing paper contact the blanket cylinders in surface-to-surface manner between two points on circumferences of two different blank cylinders such that the tension of paper passing through the printing units is kept constant all the time. Furthermore, the cylinders in the present invention do not change its rotational direction, which makes it possible, and facilitates, to keep the tension of the printing paper constant. In contrast, Fujishiro's plate cylinders keep changing their rotational directions as well as the positions of the rotational axes, which makes it unavoidable to apply variable tension to the printing paper.

In view of foregoing, Fujishiro does not teach every element claimed in claims 1-3 of the present invention. Applicant respectfully requests withdrawal of the rejections.

Brennan Does Not Teach Claims 1-3

The Examiner stated that "Brennan et al. teaches a rotary printing press having a tension control device, 50, which maintains a constant tension of the printing paper passing through multiple printing units and therefore minimizes the loss of registration between the printing units."

Brennan's tension control device (50) has an adjustment roller (52), a device (64 and 66) for measuring the tension on opposed sides of a web (14) passing down-stream from the adjustment roller (52), and a device (82) responsive to the measuring device (64 and 66) for

automatically approximately equalizing the tension of the web (14) on the adjustment roller (52) on opposed sides of the adjustment roller (52).

However, the tension control device (50) may help in maintaining a constant tension of the printing paper, but since adjusting comes with a displacement of the bearing cup (68) and the one end of the adjustment roller (52) with has the bearing cup (68) (See, e.g., lines 57-59, column 2 of Brennan et al.) Brennan's structure cannot avoid introducing extra pin secession phenomenon.

At the same time, the tension control device (50) dose not cure the deficiencies of the surface-to-surface contacts between the printing paper and the cylinders.

In view of foregoing, Fujishiro does not teach claims 1-3 of the present invention, and Brennan does not cure the deficiencies of Fujishiro. Therefore, the combination of Fujishiro and Brennan does not teach or suggest all the elements in Claims 1-3. Applicant respectfully requests withdrawal of the rejections.

CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that claims 1-3 are in condition for allowance, and such action is respectfully solicited. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to contact the undersigned attorney at the number listed below.

Respectively submitted,

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